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FILE COVERS 1907 - 12 Feb 2009 VOL 150 ISS 7
FILE LAST UPDATED: 11 Feb 2009 (20090211/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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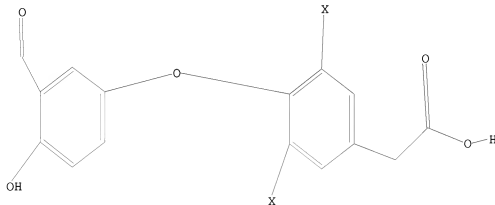
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L1 STRUCTURE UPLOADED

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L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 18:00:17 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 884 TO ITERATE

100.0% PROCESSED 884 ITERATIONS
 SEARCH TIME: 00.00.01

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L3 4 L2

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L4 0 L3 AND PY<2003

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L3 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 2007:632256 CAPLUS

DOCUMENT NUMBER: 147:226220

TITLE: QSAR study of selective ligands for the thyroid hormone receptor β

AUTHOR(S): Liu, Huanxiang; Gramatica, Paola

CORPORATE SOURCE: QSAR Research Unit in Environmental Chemistry and Ecotoxicology, Department of Structural and Functional Biology, University of Insubria, Varese, 21100, Italy
 Bioorganic & Medicinal Chemistry (2007), 15(15), 5251-5261

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In this paper, an accurate and reliable QSAR model of 87 selective ligands for the thyroid hormone receptor β 1 (TR β 1) was developed, based on theor. mol. descriptors to predict the binding affinity of compds. with receptor. The structural characteristics of compds. were described wholly by a large amount of mol. structural descriptors calculated by DRAGON. Six

most

relevant structural descriptors to the studied activity were selected as the inputs of QSAR model by a robust optimization algorithm Genetic Algorithm. The built model was fully assessed by various validation methods, including internal and external validation, Y-randomization test, chemical applicability domain, and all the validations indicate that the QSAR model we proposed is robust and satisfactory. Thus, the built QSAR model can be used to fast and accurately predict the binding affinity of compds. (in the defined applicability domain) to TR β 1. At the same time, the model proposed could also identify and provide some insight into what structural features are related to the biol. activity of these compds. and provide some instruction for further designing the new selective ligands for TR β 1 with high activity.

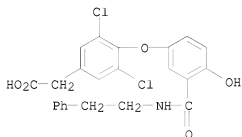
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 725239-73-6 725239-74-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (QSAR of selective ligands for thyroid hormone receptor β)

10/923,271

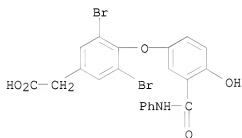
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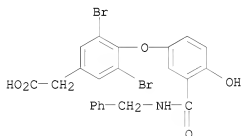
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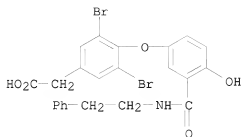
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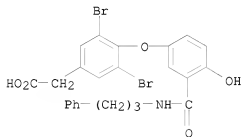
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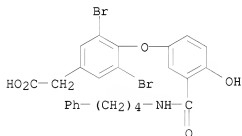
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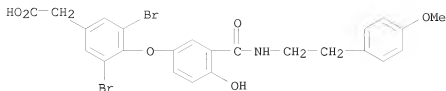
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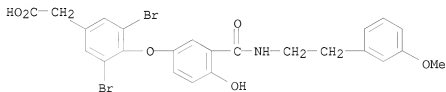
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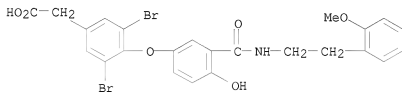
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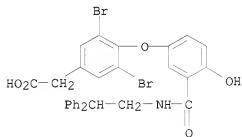
RN 725239-72-5 CAPLUS

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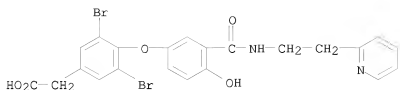
RN 725239-73-6 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[3-[[2,2-diphenylethyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



RN 725239-74-7 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[2-(2-pyridinyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 2007:590026 CAPLUS

DOCUMENT NUMBER: 147:226206

TITLE: 2D QSAR studies on thyroid hormone receptor ligands

AUTHOR(S): Valadares, Napoleao F.; Castilho, Marcelo S.;

Polikarpov, Igor; Garratt, Richard C.

CORPORATE SOURCE: Departamento de Fisica e Informatica, Instituto de Fisica de Sao Carlos, Universidade de Sao Paulo, Sao Carlos-SP, 13560-970, Brazil

SOURCE: Bioorganic & Medicinal Chemistry (2007), 15(13), 4609-4617

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 2D QSAR studies were carried out for a series of 55 ligands for the Thyroid receptors, TR α and TR β . Significant cross-validated correlation coeffs. ($q^2 = 0.781$ (TR α) and 0.693 (TR β)) were obtained. The models' predictive abilities were proved more valuable than the classical 2D-QSAR, and were further investigated by an external test set of 13 compds. The predicted values are in good agreement with exptl. values, suggesting that the models could be useful in the design of novel, more potent TR ligands. Contribution map anal. identified a number of positions that are promising for the development of receptor isoform specific ligands.

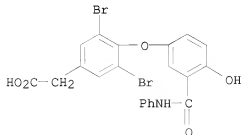
IT 725239-64-5

RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)

(QSAR studies on thyroid hormone receptor ligands)

RN 725239-64-5 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-(phenylamino)carbonyl]phenoxy]- (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:927006 CAPLUS

DOCUMENT NUMBER: 141:395288

TITLE: New [3,5-dihalo-4-(4-hydroxyphenoxy)phenyl]acetic acid derivatives useful as thyroid receptor ligands, and their preparation, pharmaceutical compositions, and methods of use

INVENTOR(S): Ryono, Dennis E.; Hangeland, Jon J.; Friends, Todd J.; Dejneka, Tamara; Devasthale, Pratik; Caringal, Yolanda V.; Zhang, Minsheng; Dowsyko, Arthur M. P.; Malm, Johan; Sanin, Andrei

PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA

SOURCE: PCT Int. Appl., 94 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

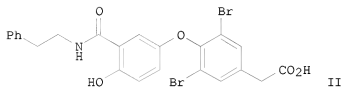
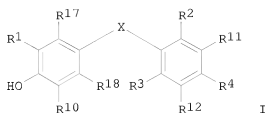
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 20050004184	A1	20050106	US 2004-826100	20040415
PRIORITY APPLN. INFO.:			US 2003-463774P	P 20030418
OTHER SOURCE(S):	MARPAT 141:395288			

GI



AB Thyroid receptor ligands are provided which have the general formula I [wherein: R1 = (un)substituted CONR5R6, CH2NR5R6, NR5COR6, OR7, R8, 4-R9-4,5-dihydrooxazol-2-yl; R2, R3 = H, halo, C1-4 alkyl or C3-5 cycloalkyl, provided that at least 1 of R2 and R3 ≠ H; R4 = (CH2)nR13 or (CH2)nCONR16CR13R14R15; R5, R6 = H, (hetero)aryl, (cyclo)alkyl, or (hetero)aralkyl; R7 = (hetero)aryl, alkyl, or (hetero)aralkyl; R8 = (hetero)aryl or cycloalkyl; R9 = R7 or H; R10 = H, halo, cyano, or alkyl; R11, R12 = H, halo, alkoxy, OH, cyano, or alkyl; R13 = COOH and esters, phosphonic and phosphinic acid and esters, sulfonic acid, tetrazole, hydroxamic acid, thiazolidinedione, acylsulfonamide, or other carboxylic acid surrogates; R14, R15 = H, alkyl; or R14R15 = (CH2)2-5, forming 3- to 6-membered cycloalkyl rings; R16 = H or C1-4 alkyl; R17 and R18 = H, halo, or alkyl; n = 0-4; X = O, S, S(O)2, S(O), Se, CO, NH, or CH2]. In addition, a method is provided for preventing, inhibiting or treating diseases or disorders associated with metabolism dysfunction, or which are dependent upon the expression of, a T3 regulated gene, wherein a compound I is administered therapeutically. Claims cover the above, as well as pharmaceutical compns. containing I, and methods of coadministration of I with other compds., particularly certain antidiabetic agents. Compds. I include selective agonists, partial agonists, antagonists, and partial antagonists of thyroid receptors (no data). Approx. 168 compds. were prepared For instance, Me (3,5-dibromo-4-hydroxyphenyl)acetate underwent O-arylation with (4-MeOC6H4)2I+ BF4-, and the resultant 4-methoxyphenyl ether derivative underwent a sequence of: (1) formylation in the 3-position, (2) O-demethylation, (3) oxidation of the aldehyde to an acid, (4) amidation of the acid, and (5) alkaline saponification of the ester, to give title compound

II.

IT 725239-20-3P 725239-64-5P 725239-65-6P
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 725239-70-3P 725239-71-4P 725239-72-5P
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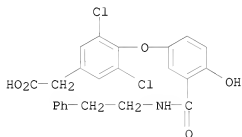
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RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of [dihalo(hydroxyphenoxy)phenyl]acetic acid derivs. as thyroid receptor ligands)

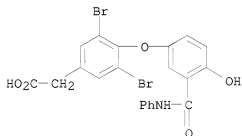
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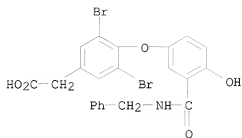
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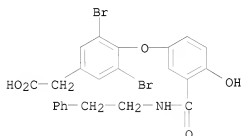
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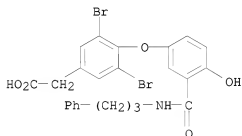
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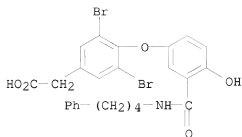
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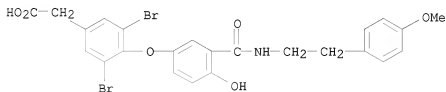


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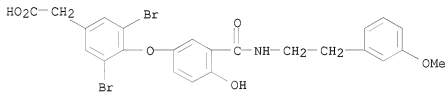
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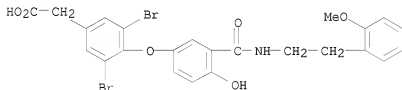
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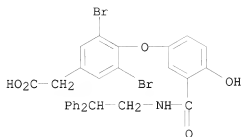


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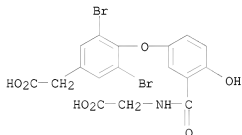
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RN 788822-75-3 CAPLUS

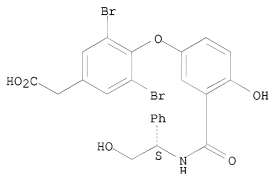
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RN 788822-76-4 CAPLUS

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Absolute stereochemistry.

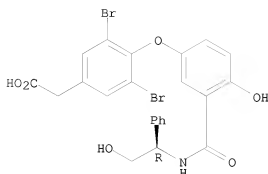


RN 788822-77-5 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R)-2-hydroxy-1-phenylethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.

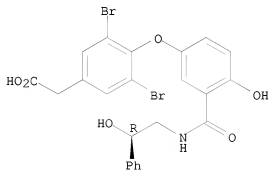
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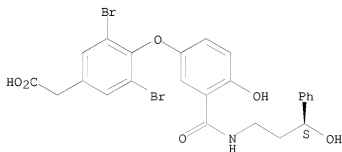
Absolute stereochemistry.



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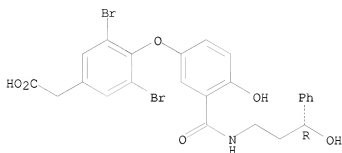
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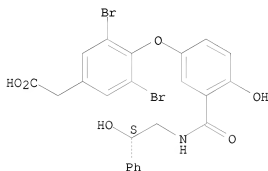
Absolute stereochemistry.



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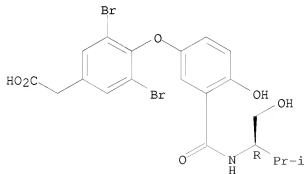
Absolute stereochemistry.



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Absolute stereochemistry.

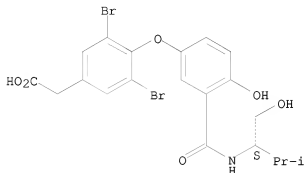


10/923,271

RN 788822-83-3 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1S)-1-(hydroxymethyl)-2-methylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

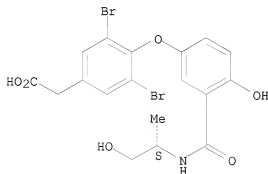
Absolute stereochemistry.



RN 788822-84-4 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1S)-2-hydroxy-1-methylethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

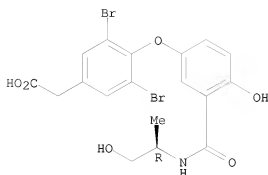
Absolute stereochemistry.



RN 788822-85-5 CAPLUS

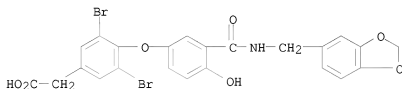
CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R)-2-hydroxy-1-methylethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.



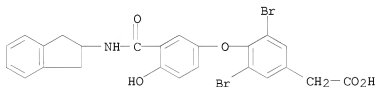
RN 788822-86-6 CAPLUS

CN Benzeneacetic acid, 4-[3-[[[(1,3-benzodioxol-5-ylmethyl)amino]carbonyl]-4-hydroxyphenoxy]-3,5-dibromo- (CA INDEX NAME)



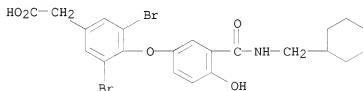
RN 788822-87-7 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(2,3-dihydro-1H-inden-2-yl)amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



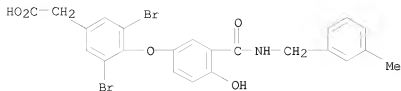
RN 788822-88-8 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(cyclohexylmethyl)amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



RN 788822-89-9 CAPLUS

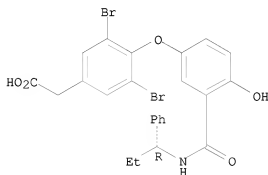
CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(3-methylphenyl)methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



RN 788822-90-2 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R)-1-phenylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

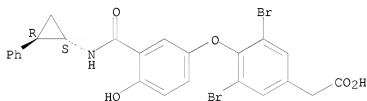
Absolute stereochemistry.



RN 788822-91-3 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R,2S)-2-phenylcyclopropyl]amino]carbonyl]phenoxy]-, rel- (CA INDEX NAME)

Relative stereochemistry.

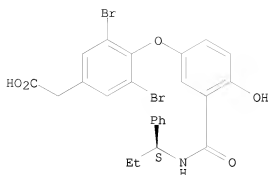


RN 788822-92-4 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1S)-1-phenylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

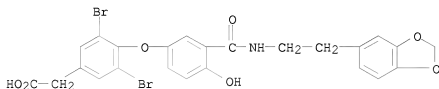
Absolute stereochemistry.

10/923,271



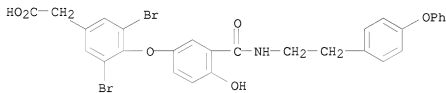
RN 788822-93-5 CAPLUS

CN Benzeneacetic acid, 4-[3-[[[2-(1,3-benzodioxol-5-yl)ethyl]amino]carbonyl]-4-hydroxyphenoxy]-3,5-dibromo- (CA INDEX NAME)



RN 788822-94-6 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[2-(4-phenoxyphenyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

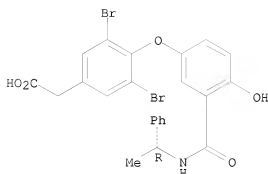


RN 788822-95-7 CAPLUS

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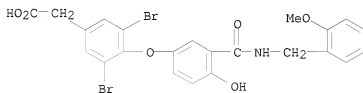
Absolute stereochemistry.

10/923,271



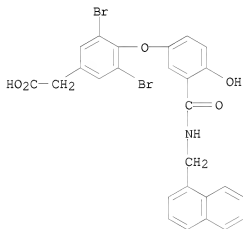
RN 788822-96-8 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(2-methoxyphenyl)methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



RN 788822-97-9 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1-naphthalenyl)methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

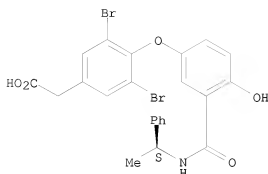


RN 788822-98-0 CAPLUS

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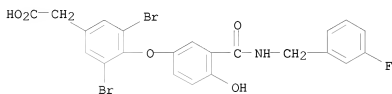
Absolute stereochemistry.

10/923,271



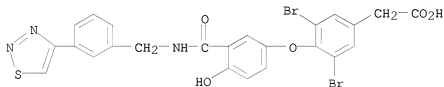
RN 788822-99-1 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(3-fluorophenyl)methyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



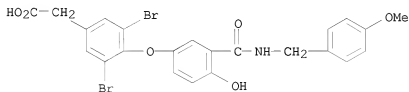
RN 788823-00-7 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1,2,3-thiadiazol-4-yl)phenyl]methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



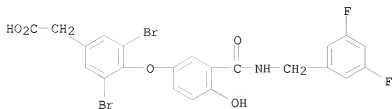
RN 788823-01-8 CAPLUS

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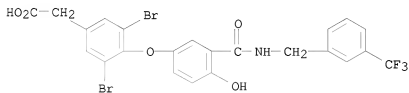
RN 788823-02-9 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(3,5-difluorophenyl)methyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



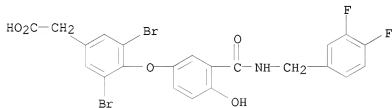
RN 788823-03-0 CAPLUS

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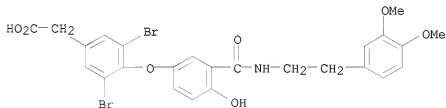
RN 788823-04-1 CAPLUS

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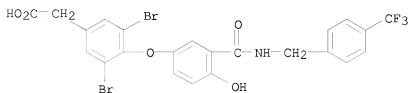
RN 788823-05-2 CAPLUS

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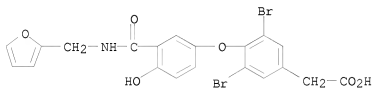
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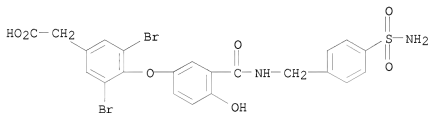
RN 788823-07-4 CAPLUS

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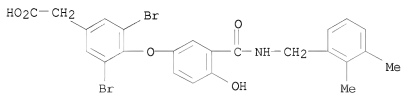
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CN Benzeacetic acid, 4-[3-[[[4-(aminosulfonyl)phenyl]methyl]amino]carbonyl]-4-hydroxyphenoxy]-3,5-dibromo- (CA INDEX NAME)



RN 788823-09-6 CAPLUS

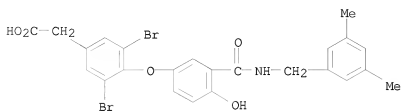
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RN 788823-10-9 CAPLUS

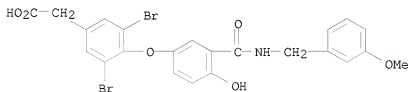
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dimethylphenyl)methyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



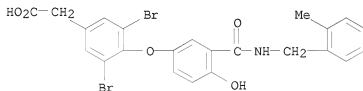
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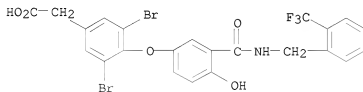
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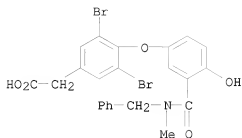
RN 788823-13-2 CAPLUS

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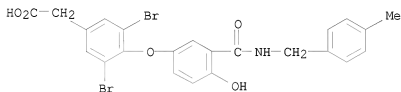
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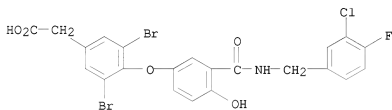
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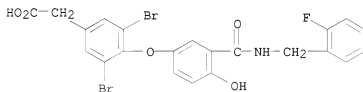
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RN 788823-17-6 CAPLUS

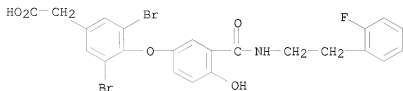
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RN 788823-18-7 CAPLUS

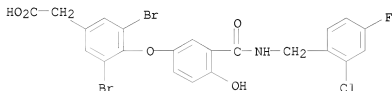
CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(2-fluorophenyl)methyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)

fluorophenyl)ethyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



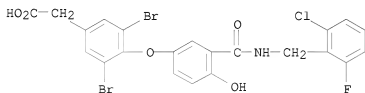
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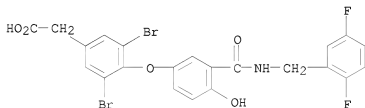
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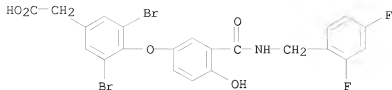
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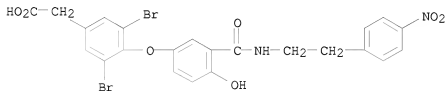
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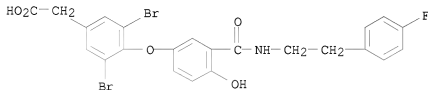
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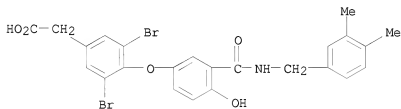
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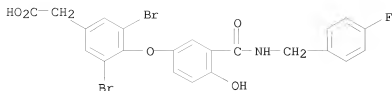
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CN Benzeacetic acid, 3,5-dibromo-4-[3-[[[2-(4-fluorophenyl)ethyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



RN 788823-26-7 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[3-[[[2-(4-fluorophenyl)ethyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 2004:465510 CAPLUS

DOCUMENT NUMBER: 141:133551

TITLE: Thyroid receptor ligands. Part 2: thyromimetics with improved selectivity for the thyroid hormone receptor beta

AUTHOR(S): Hangeland, Jon J.; Doweiko, Arthur M.; Dejneka, Tamara; Friends, Todd J.; Devasthale, Pratik; Mellstrom, Karin; Sandberg, Johnny; Grynfarb, Marlena; Sack, John S.; Einspahr, Howard; Faernegardh, Mathias; Husman, Bolette; Ljunggren, Jan; Koehler, Konrad; Sheppard, Cheryl; Malm, Johan; Ryono, Denis E.

CORPORATE SOURCE: Pharmaceutical Research Institute, Bristol-Myers Squibb, Princeton, NJ, 08543, USA

SOURCE: Bioorganic & Medicinal Chemistry Letters (2004), 14(13), 3549-3553

CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:133551

AB A set of thyromimetics having improved selectivity for TR- β 1 were prepared by replacing the 3'-iso-Pr group of 2 and 3 with substituents having increased steric bulk. From this limited SAR study, the most potent and selective compds. identified were derived from 2 and contained a 3'-Ph moiety bearing small hydrophobic groups meta to the biphenyl link. X-ray crystal data of 15c complexed with TR- β 1 LBD shows methionine 442 to be displaced by the bulky R3' Ph Et amide side chain. Movement of this amino acid side chain provides an expanded pocket for the bulky side chain while the ligand-receptor complex retains full agonist activity.

IT 725239-20-3P 725239-64-5P 725239-65-6P

725239-66-7P 725239-67-8P 725239-69-0P

725239-70-3P 725239-71-4P 725239-72-5P

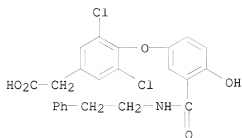
725239-73-6P 725239-74-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

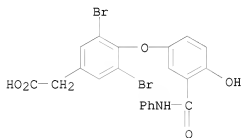
(structure activity relationships of thyromimetics with selectivity for thyroid hormone receptor beta)

RN 725239-20-3 CAPLUS

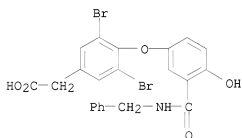
CN Benzeneacetic acid, 3,5-dichloro-4-[4-hydroxy-3-[(2-phenylethyl)amino]carbonyl]phenoxy]- (CA INDEX NAME)



RN 725239-64-5 CAPLUS

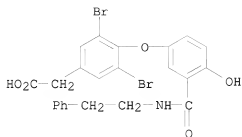
CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-
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RN 725239-65-6 CAPLUS

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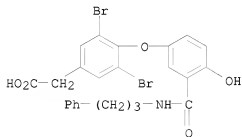
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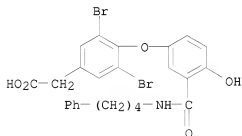
RN 725239-67-8 CAPLUS

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RN 725239-69-0 CAPLUS

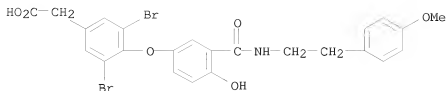
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RN 725239-70-3 CAPLUS

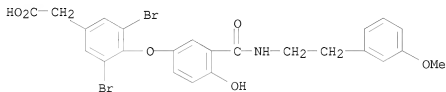
CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[2-(4-methoxyphenyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

10/923,271



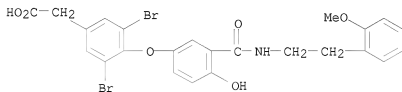
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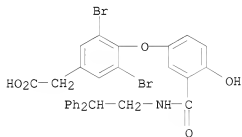
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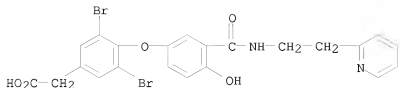
RN 725239-73-6 CAPLUS

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RN 725239-74-7 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[2-(2-pyridinyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file caplus
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
30.80	217.40

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

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ENTRY	SESSION
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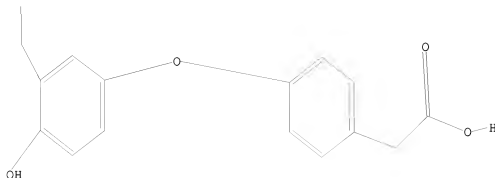
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10/923,271

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Structure attributes must be viewed using STN Express query preparation.

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Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 18:08:11 FILE 'REGISTRY'
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L7 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:632256 CAPLUS
DOCUMENT NUMBER: 147:226220
TITLE: QSAR study of selective ligands for the thyroid hormone receptor β
AUTHOR(S): Liu, Huanxiang; Gramatica, Paola
CORPORATE SOURCE: QSAR Research Unit in Environmental Chemistry and Ecotoxicology, Department of Structural and Functional

SOURCE: Biology, University of Insubria, Varese, 21100, Italy
Bioorganic & Medicinal Chemistry (2007), 15(15),
5251-5261

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In this paper, an accurate and reliable QSAR model of 87 selective ligands for the thyroid hormone receptor β 1 (TR β 1) was developed, based on theor. mol. descriptors to predict the binding affinity of compds. with receptor. The structural characteristics of compds. were described wholly by a large amount of mol. structural descriptors calculated by DRAGON. Six

most relevant structural descriptors to the studied activity were selected as the inputs of QSAR model by a robust optimization algorithm Genetic Algorithm. The built model was fully assessed by various validation methods, including internal and external validation, Y-randomization test, chemical applicability domain, and all the validations indicate that the QSAR model we proposed is robust and satisfactory. Thus, the built QSAR model can be used to fast and accurately predict the binding affinity of compds. (in the defined applicability domain) to TR β 1. At the same time, the model proposed could also identify and provide some insight into what structural features are related to the biol. activity of these compds. and provide some instruction for further designing the new selective ligands for TR β 1 with high activity.

IT 725239-20-3 725239-64-5 725239-65-6

725239-66-7 725239-67-8 725239-69-0

725239-70-3 725239-71-4 725239-72-5

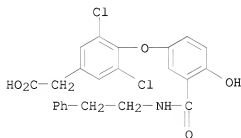
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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(QSAR of selective ligands for thyroid hormone receptor β)

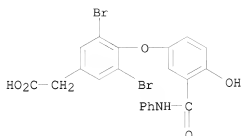
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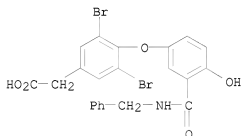


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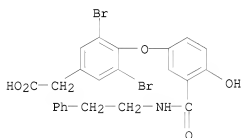
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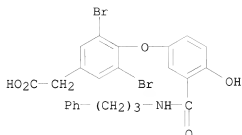
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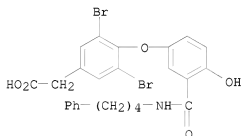
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10/923,271



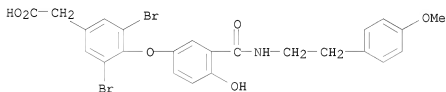
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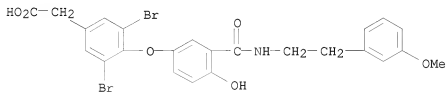
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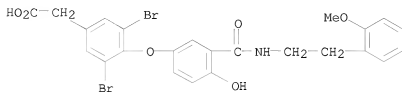
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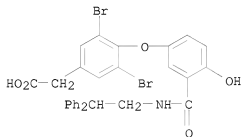
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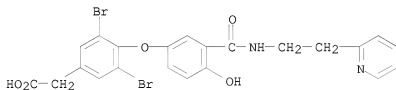
RN 725239-73-6 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[2,2-diphenylethyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



RN 725239-74-7 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[2-(2-pyridinyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:590026 CAPLUS

DOCUMENT NUMBER: 147:226206

TITLE: 2D QSAR studies on thyroid hormone receptor ligands

AUTHOR(S): Valadares, Napoleao F.; Castilho, Marcelo S.;

Polikarpov, Igor; Garratt, Richard C.

CORPORATE SOURCE: Departamento de Fisica e Informatica, Instituto de

Fisica de Sao Carlos, Universidade de Sao Paulo, Sao

Carlos-SP, 13560-970, Brazil

SOURCE: Bioorganic & Medicinal Chemistry (2007), 15(13), 4609-4617

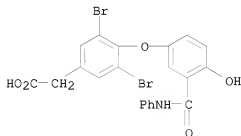
CODEN: BMECEP; ISSN: 0968-0896
 PUBLISHER: Elsevier Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB 2D QSAR studies were carried out for a series of 55 ligands for the Thyroid receptors, TR α and TR β . Significant cross-validated correlation coeffs. ($q^2 = 0.781$ (TR α) and 0.693 (TR β)) were obtained. The models' predictive abilities were proved more valuable than the classical 2D-QSAR, and were further investigated by an external test set of 13 compds. The predicted values are in good agreement with exptl. values, suggesting that the models could be useful in the design of novel, more potent TR ligands. Contribution map anal. identified a number of positions that are promising for the development of receptor isoform specific ligands.

IT 725239-64-5
 RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)
 (QSAR studies on thyroid hormone receptor ligands)

RN 725239-64-5 CAPLUS

CN Benzenecetic acid, 3,5-dibromo-4-[4-hydroxy-3-
 [(phenylamino)carbonyl]phenoxy]- (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:927006 CAPLUS
 DOCUMENT NUMBER: 141:395288
 TITLE: New [3,5-dihalo-4-(4-hydroxyphenoxy)phenyl]acetic acid derivatives useful as thyroid receptor ligands, and their preparation, pharmaceutical compositions, and methods of use

INVENTOR(S): Ryono, Dennis E.; Hangeland, Jon J.; Friends, Todd J.; Dejneka, Tamara; Devasthale, Pratik; Caringal, Yolanda V.; Zhang, Minsheng; Dowsky, Arthur M. P.; Malm, Johan; Sanin, Andrei

PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA

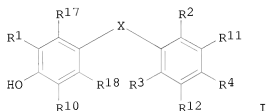
SOURCE: PCT Int. Appl., 94 pp.
 CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: English

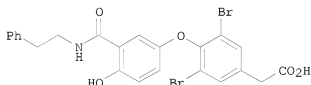
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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US 20050004184	A1	20050106	US 2004-826100	20040415
PRIORITY APPLN. INFO.:			US 2003-463774P	P 20030418
OTHER SOURCE(S):	MARPAT 141:395288			
GI				



I



II

AB Thyroid receptor ligands are provided which have the general formula I [wherein: R¹ = (un)substituted CONR⁵SR⁶, CH₂NR⁵SR⁶, NR⁵COR⁶, OR⁷, R⁸, 4-R⁹-4,5-dihydrooxazol-2-yl; R², R³ = H, halo, C1-4 alkyl or C3-5 cycloalkyl, provided that at least 1 of R² and R³ ≠ H; R⁴ = (CH₂)_nR¹³ or (CH₂)_nCONR¹⁶CR¹³R¹⁴R¹⁵; R⁵, R⁶ = H, (hetero)aryl, (cyclo)alkyl, or (hetero)aralkyl; R⁷ = (hetero)aryl, alkyl, or (hetero)aralkyl; R⁸ = (hetero)aryl or cycloalkyl; R⁹ = R⁷ or H; R¹⁰ = H, halo, cyano, or alkyl; R¹¹, R¹² = H, halo, alkoxy, OH, cyano, or alkyl; R¹³ = COOH and esters, phosphonic and phosphinic acid and esters, sulfonic acid, tetrazole, hydroxamic acid, thiazolidinedione, acylsulfonamide, or other carboxylic acid surrogates; R¹⁴, R¹⁵ = H, alkyl; or R¹⁴R¹⁵ = (CH₂)₂₋₅, forming 3- to 6-membered cycloalkyl rings; R¹⁶ = H or C1-4

alkyl; R17 and R18 = H, halo, or alkyl; n = 0-4; X = O, S, S(O)2, S(O), Se, CO, NH, or CH2]. In addition, a method is provided for preventing, inhibiting or treating diseases or disorders associated with metabolism dysfunction, or which are dependent upon the expression of, a T3 regulated gene, wherein a compound I is administered therapeutically. Claims cover the above, as well as pharmaceutical compns. containing I, and methods of coadministration of I with other compds., particularly certain antidiabetic agents. Compds. I include selective agonists, partial agonists, antagonists, and partial antagonists of thyroid receptors (no data). Approx. 168 compds. were prepared For instance, Me (3,5-dibromo-4-hydroxyphenyl)acetate underwent O-arylation with (4-MeOC6H4)2I+ BF4-, and the resultant 4-methoxyphenyl ether derivative underwent a sequence of: (1) formylation in the 3-position, (2) O-demethylation, (3) oxidation of the aldehyde to an acid, (4) amidation of the acid, and (5) alkaline saponification of the ester, to give title compound

II.

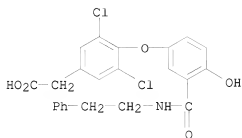
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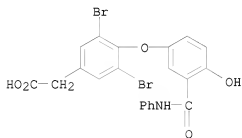
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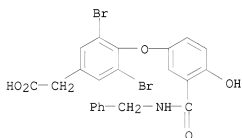
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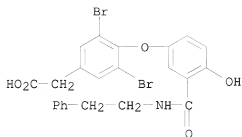
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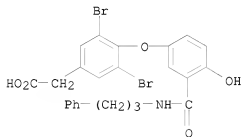
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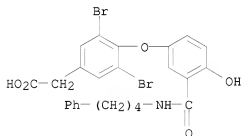
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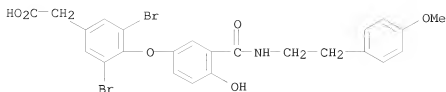
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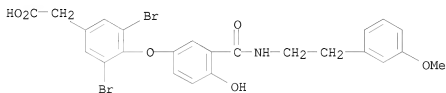
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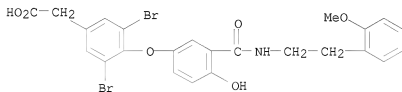
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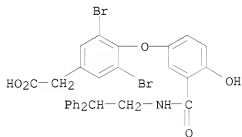
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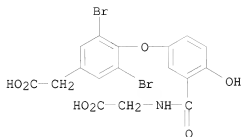
RN 725239-73-6 CAPLUS

CN Benzenecetic acid, 3,5-dibromo-4-[3-[[2,2-diphenylethyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



RN 788822-75-3 CAPLUS

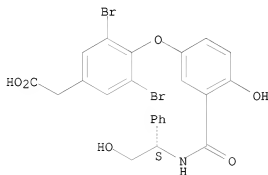
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RN 788822-76-4 CAPLUS

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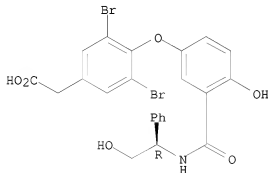
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RN 788822-77-5 CAPLUS

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Absolute stereochemistry.

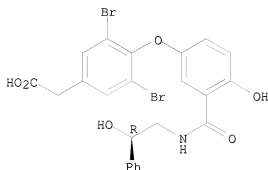


RN 788822-78-6 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(2R)-2-hydroxy-2-phenylethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

10/923,271

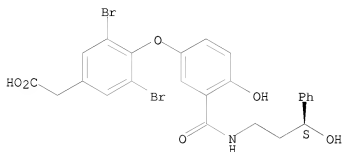
Absolute stereochemistry.



RN 788822-79-7 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(3S)-3-hydroxy-3-phenylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

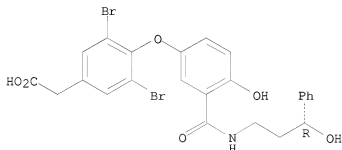
Absolute stereochemistry.



RN 788822-80-0 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(3R)-3-hydroxy-3-phenylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.

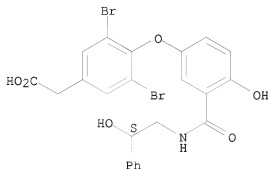


RN 788822-81-1 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(2S)-2-hydroxy-2-

phenylethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

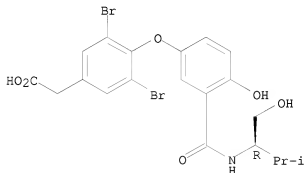
Absolute stereochemistry.



RN 788822-82-2 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

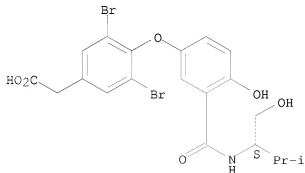
Absolute stereochemistry.



RN 788822-83-3 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1S)-1-(hydroxymethyl)-2-methylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.

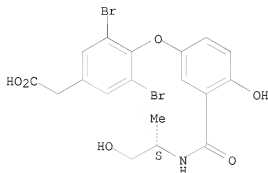


10/923,271

RN 788822-84-4 CAPLUS

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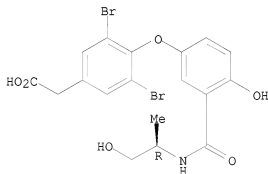
Absolute stereochemistry.



RN 788822-85-5 CAPLUS

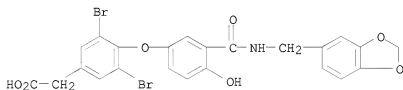
CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R)-2-hydroxy-1-methylethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.



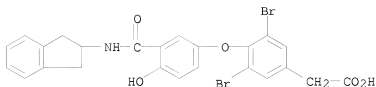
RN 788822-86-6 CAPLUS

CN Benzeneacetic acid, 4-[3-[[[(1,3-benzodioxol-5-ylmethyl)amino]carbonyl]-4-hydroxyphenoxy]-3,5-dibromo- (CA INDEX NAME)



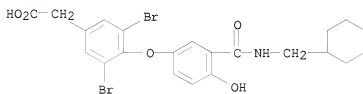
RN 788822-87-7 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(2,3-dihydro-1H-inden-2-yl)amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



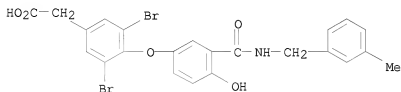
RN 788822-88-8 CAPLUS

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RN 788822-89-9 CAPLUS

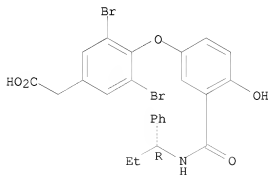
CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(3-methylphenyl)methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



RN 788822-90-2 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R)-1-phenylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.

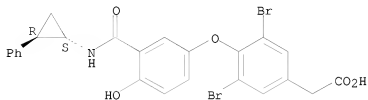


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RN 788822-91-3 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R,2S)-2-phenylcyclopropyl]amino]carbonyl]phenoxy]-, rel- (CA INDEX NAME)

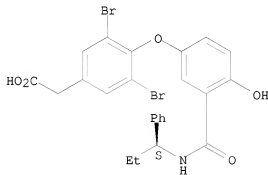
Relative stereochemistry.



RN 788822-92-4 CAPLUS

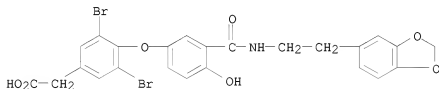
CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1S)-1-phenylpropyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.



RN 788822-93-5 CAPLUS

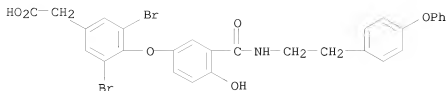
CN Benzeacetic acid, 4-[3-[[[2-(1,3-benzodioxol-5-yl)ethyl]amino]carbonyl]-4-hydroxyphenoxy]-3,5-dibromo- (CA INDEX NAME)



RN 788822-94-6 CAPLUS

CN Benzeacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[2-(4-phenoxyphenyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

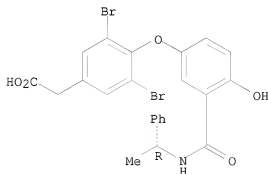
10/923,271



RN 788822-95-7 CAPLUS

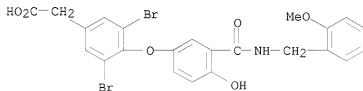
CN Benzenecacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1R)-1-phenylethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.



RN 788822-96-8 CAPLUS

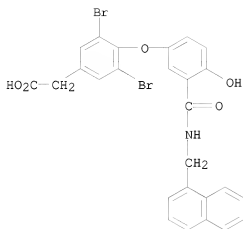
CN Benzenecacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(2-methoxyphenyl)methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



RN 788822-97-9 CAPLUS

CN Benzenecacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1-naphthalenyl)methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

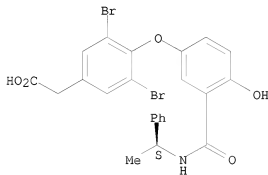
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RN 788822-98-0 CAPLUS

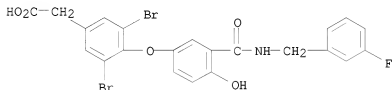
CN Benzenecetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(1S)-1-phenylethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)

Absolute stereochemistry.



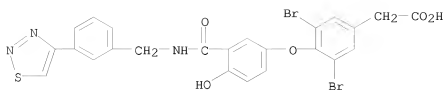
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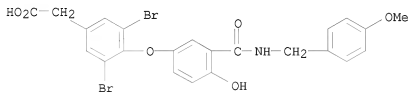
RN 788823-00-7 CAPLUS

CN Benzenecetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(3-(1,2,3-thiadiazol-4-yl)phenyl)methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



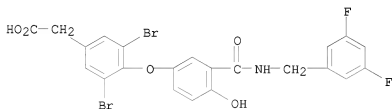
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CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[(4-methoxyphenyl)methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



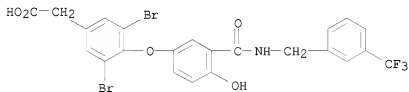
RN 788823-02-9 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(3,4-difluorophenyl)methyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



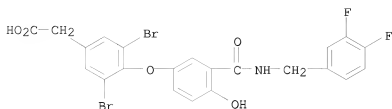
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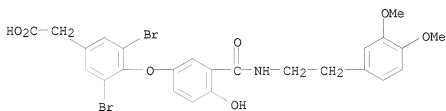
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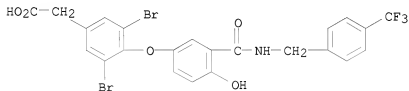
RN 788823-05-2 CAPLUS

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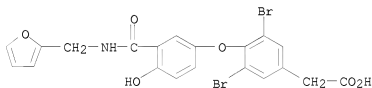
RN 788823-06-3 CAPLUS

CN Benzenecetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[4-(trifluoromethyl)phenyl]methyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



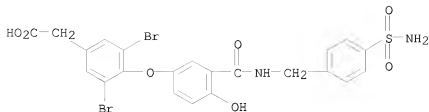
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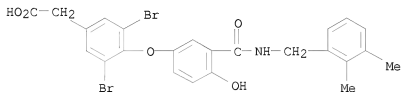
RN 788823-08-5 CAPLUS

CN Benzenecetic acid, 4-[3-[[[4-(aminosulfonyl)phenyl]methyl]amino]carbonyl]-4-hydroxyphenoxy]-3,5-dibromo- (CA INDEX NAME)



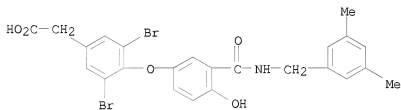
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CN Benzenesulfonamide, 4-((3,5-dibromo-4-hydroxyphenoxy)methylamino)carbonyl)- (CA INDEX NAME)



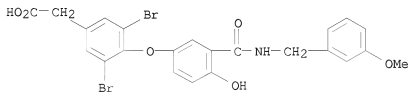
RN 788823-10-9 CAPLUS

CN Benzenesulfonamide, 4-((3,5-dimethyl-4-hydroxyphenoxy)methylamino)carbonyl)- (CA INDEX NAME)



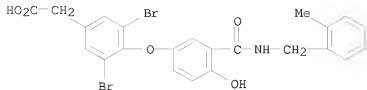
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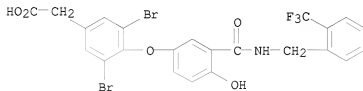
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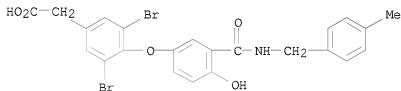
RN 788823-13-2 CAPLUS

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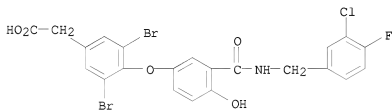
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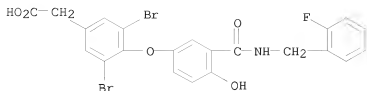
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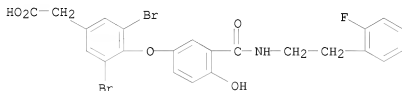
RN 788823-17-6 CAPLUS

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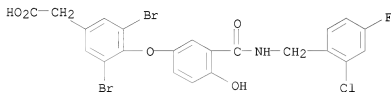
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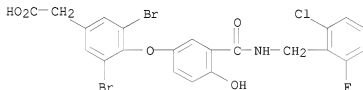
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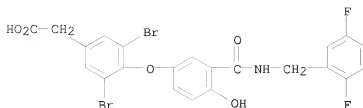
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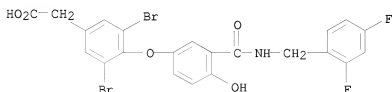
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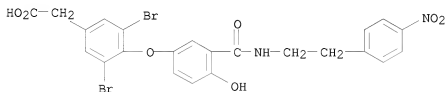
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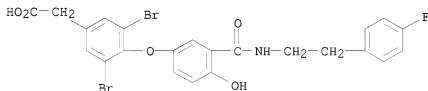
RN 788823-23-4 CAPLUS

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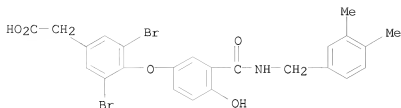
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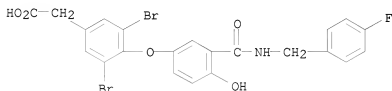


RN 788823-25-6 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(3,4-dimethylphenyl)methyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



RN 788823-26-7 CAPLUS
 CN Benzeneacetic acid, 3,5-dibromo-4-[3-[[[(4-fluorophenyl)methyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 2004:465510 CAPLUS

DOCUMENT NUMBER: 141:133551

TITLE: Thyroid receptor ligands. Part 2: thyromimetics with improved selectivity for the thyroid hormone receptor beta

AUTHOR(S): Hangeland, Jon J.; Doweiko, Arthur M.; Dejneka, Tamara; Friends, Todd J.; Devasthale, Pratik; Mellstrom, Karin; Sandberg, Johnny; Grynfarb, Marlena; Sack, John S.; Einspahr, Howard; Faernegardh, Mathias; Husman, Bolette; Ljunggren, Jan; Koehler, Konrad; Sheppard, Cheryl; Malm, Johan; Ryono, Denis E.

CORPORATE SOURCE: Pharmaceutical Research Institute, Bristol-Myers Squibb, Princeton, NJ, 08543, USA

SOURCE: Bioorganic & Medicinal Chemistry Letters (2004), 14(13), 3549-3553

CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:133551

AB A set of thyromimetics having improved selectivity for TR- β 1 were prepared by replacing the 3'-iso-Pr group of 2 and 3 with substituents having increased steric bulk. From this limited SAR study, the most potent and selective compds. identified were derived from 2 and contained a 3'-Ph moiety bearing small hydrophobic groups meta to the biphenyl link. X-ray crystal data of 15c complexed with TR- β 1 LBD shows methionine 442 to be displaced by the bulky R3' Ph Et amide side chain. Movement of this amino acid side chain provides an expanded pocket for the bulky side chain while the ligand-receptor complex retains full agonist activity.

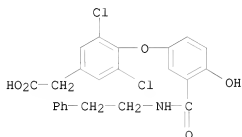
10/923,271

IT 725239-20-3P 725239-64-5P 725239-65-6P
725239-66-7P 725239-67-8P 725239-69-0P
725239-70-3P 725239-71-4P 725239-72-5P
725239-73-6P 725239-74-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL
(Biological study); PREP (Preparation)
(structure activity relationships of thyromimetics with selectivity for
thyroid hormone receptor beta)

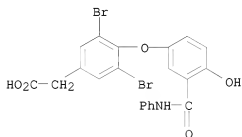
RN 725239-20-3 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[4-hydroxy-3-[(2-
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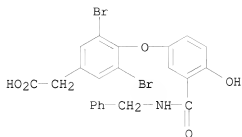
RN 725239-64-5 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-
[(phenylamino)carbonyl]phenoxy]- (CA INDEX NAME)



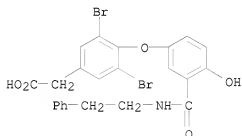
RN 725239-65-6 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-
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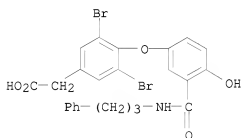
RN 725239-66-7 CAPLUS

CN Benzeneacetic acid, 3,5-dibromo-4-[4-hydroxy-3-[(2-phenylethyl)amino]carbonyl]phenoxy]- (CA INDEX NAME)



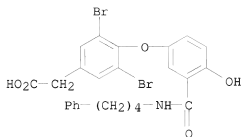
RN 725239-67-8 CAPLUS

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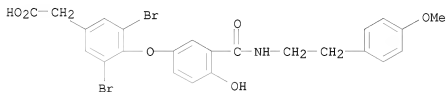
RN 725239-69-0 CAPLUS

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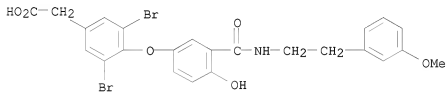
RN 725239-70-3 CAPLUS

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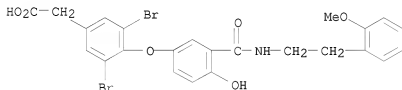
RN 725239-71-4 CAPLUS

CN Benzenecetic acid, 3,5-dibromo-4-[[4-hydroxy-3-[[[2-(3-methoxyphenyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



RN 725239-72-5 CAPLUS

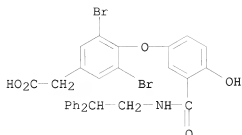
CN Benzenecetic acid, 3,5-dibromo-4-[[4-hydroxy-3-[[[2-(2-methoxyphenyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



RN 725239-73-6 CAPLUS

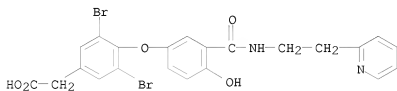
CN Benzenecetic acid, 3,5-dibromo-4-[[3-[[[2,2-diphenylethyl]amino]carbonyl]-4-hydroxyphenoxy]- (CA INDEX NAME)

10/923,271



RN 725239-74-7 CAPLUS

CN Benzenecetic acid, 3,5-dibromo-4-[4-hydroxy-3-[[[2-(2-pyridinyl)ethyl]amino]carbonyl]phenoxy]- (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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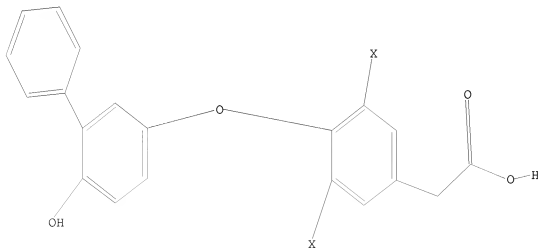
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L9 STRUCTURE UPLOADED

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L9 HAS NO ANSWERS

L9 STR



Toh

12/02/2009

Structure attributes must be viewed using STN Express query preparation.

=> s l9 full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 18:10:29 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 334 TO ITERATE

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L10 38 SEA SSS FUL L9

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L11 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:632256 CAPLUS

DOCUMENT NUMBER: 147:226220

TITLE: QSAR study of selective ligands for the thyroid hormone receptor β

AUTHOR(S): Liu, Huanxiang; Gramatica, Paola

CORPORATE SOURCE: QSAR Research Unit in Environmental Chemistry and Ecotoxicology, Department of Structural and Functional Biology, University of Insubria, Varese, 21100, Italy

SOURCE: Bioorganic & Medicinal Chemistry (2007), 15(15),

5251-5261

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In this paper, an accurate and reliable QSAR model of 87 selective ligands for the thyroid hormone receptor β 1 (TR β 1) was developed, based on theor. mol. descriptors to predict the binding affinity of compds. with receptor. The structural characteristics of compds. were described wholly by a large amount of mol. structural descriptors calculated by DRAGON. Six most relevant structural descriptors to the studied activity were selected as the inputs of QSAR model by a robust optimization algorithm Genetic Algorithm. The built model was fully assessed by various validation methods, including internal and external validation, Y-randomization test,

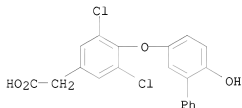
chemical applicability domain, and all the validations indicate that the QSAR model we proposed is robust and satisfactory. Thus, the built QSAR model can be used to fast and accurately predict the binding affinity of compds. (in the defined applicability domain) to TRB1. At the same time, the model proposed could also identify and provide some insight into what structural features are related to the biol. activity of these compds. and provide some instruction for further designing the new selective ligands for TRB1 with high activity.

IT 725239-22-5 725239-24-7 725239-26-9
725239-28-1 725239-30-5 725239-32-7
725239-34-9 725239-35-0 725239-37-2
725239-39-4 725239-41-8 725239-43-0
725239-45-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(QSAR of selective ligands for thyroid hormone receptor β)

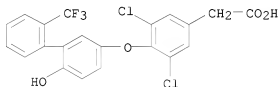
RN 725239-22-5 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(6-hydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



RN 725239-24-7 CAPLUS

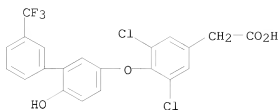
CN Benzeneacetic acid, 3,5-dichloro-4-[[6-hydroxy-2'-(trifluoromethyl)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)



RN 725239-26-9 CAPLUS

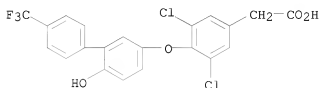
CN Benzeneacetic acid, 3,5-dichloro-4-[[6-hydroxy-3'-(trifluoromethyl)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)

10/923,271



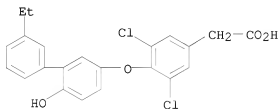
RN 725239-28-1 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[[6-hydroxy-4'-(trifluoromethyl)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)



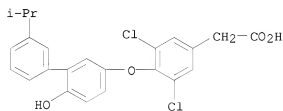
RN 725239-30-5 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(3'-ethyl-6-hydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



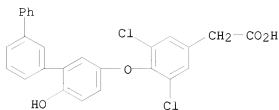
RN 725239-32-7 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[[6-hydroxy-3'-(1-methylethyl)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)



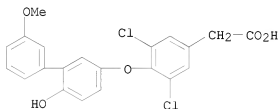
RN 725239-34-9 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(6-hydroxy[1,1':3',1''-terphenyl]-3-yl)oxy]- (CA INDEX NAME)



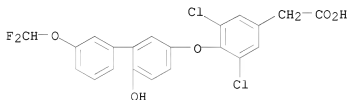
RN 725239-35-0 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(6-hydroxy-3'-methoxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



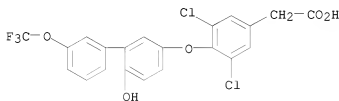
RN 725239-37-2 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[[3'-(difluoromethoxy)-6-hydroxy[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)



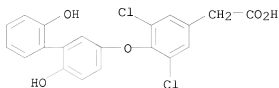
RN 725239-39-4 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[[6-hydroxy-3'-(trifluoromethoxy)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)



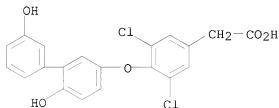
RN 725239-41-8 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(2',6-dihydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



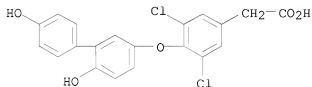
RN 725239-43-0 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(3',6-dihydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



RN 725239-45-2 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(4',6-dihydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:590026 CAPLUS

DOCUMENT NUMBER: 147:226206

TITLE: 2D QSAR studies on thyroid hormone receptor ligands

AUTHOR(S): Valadares, Napoleao F.; Castilho, Marcelo S.;

Polikarpov, Igor; Garratt, Richard C.

CORPORATE SOURCE: Departamento de Fisica e Informatica, Instituto de Fisica de Sao Carlos, Universidade de Sao Paulo, Sao Carlos-SP, 13560-970, Brazil

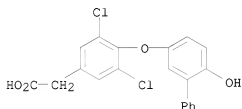
SOURCE: Bioorganic & Medicinal Chemistry (2007), 15(13), 4609-4617

PUBLISHER: CODEN: BMECEP; ISSN: 0968-0896

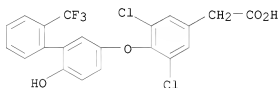
Elsevier Ltd.

DOCUMENT TYPE: Journal
 LANGUAGE: English

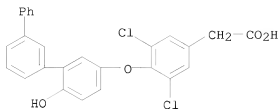
- AB 2D QSAR studies were carried out for a series of 55 ligands for the Thyroid receptors, TR α and TR β . Significant cross-validated correlation coeffs. ($q^2 = 0.781$ (TR α) and 0.693 (TR β)) were obtained. The models' predictive abilities were proved more valuable than the classical 2D-QSAR, and were further investigated by an external test set of 13 compds. The predicted values are in good agreement with exptl. values, suggesting that the models could be useful in the design of novel, more potent TR ligands. Contribution map anal. identified a number of positions that are promising for the development of receptor isoform specific ligands.
- IT 725239-22-5 725239-24-7 725239-34-9
 725239-39-4 725239-43-0
 RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)
 (QSAR studies on thyroid hormone receptor ligands)
- RN 725239-22-5 CAPLUS
- CN Benzeneacetic acid, 3,5-dichloro-4-[(6-hydroxy[1,1'-biphenyl]-3-yl)oxy]-
 (CA INDEX NAME)



- RN 725239-24-7 CAPLUS
- CN Benzeneacetic acid, 3,5-dichloro-4-[[6-hydroxy-2'-(trifluoromethyl)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)

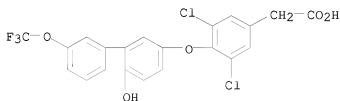


- RN 725239-34-9 CAPLUS
- CN Benzeneacetic acid, 3,5-dichloro-4-[(6-hydroxy[1,1':3',1''-terphenyl]-3-yl)oxy]- (CA INDEX NAME)



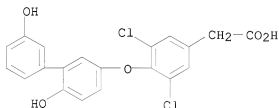
RN 725239-39-4 CAPLUS

CN Benzenecetic acid, 3,5-dichloro-4-[[6-hydroxy-3-(trifluoromethoxy)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)



RN 725239-43-0 CAPLUS

CN Benzenecetic acid, 3,5-dichloro-4-[(3',6'-dihydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:16586 CAPLUS

DOCUMENT NUMBER: 144:205141

TITLE: Thyroid receptor ligands. Part 4: 4'-amido bioisosteric ligands selective for the thyroid hormone receptor beta

AUTHOR(S): Li, Yi-Lin; Litten, Chris; Koehler, Konrad F.; Mellstroem, Karin; Garg, Neeraj; Garcia Collazo, Ana Maria; Faernegard, Mathias; Grynfarb, Marlena; Husman, Bolette; Sandberg, Johnny; Malm, Johan

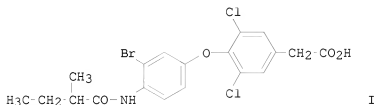
CORPORATE SOURCE: Karo Bio AB, Huddinge, S-141 57, Swed.

SOURCE: Bioorg. Med. Chem. Lett. (2006), 16(4), 884-886

CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 144:205141
 GI

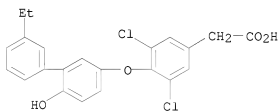


AB Based on the examination of the x-ray crystallog. structures of the LBD of TR α and TR β in complex with KB-141 (2), a number of novel 4'-hydroxy bioisosteric thyromimetics were prepared. Optimal affinity and β -selectivity (33 times), was found with a medium-sized alkyl-substituted amido group; iso-Bu (I). It can be concluded that bioisosteric replacements of the 4'-hydroxy position represent a new promising class of TR β -selective synthetic thyromimetics.

IT 725239-30-5
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (preparation of 4'-amido bioisosteric ligands selective for thyroid hormone receptor β and thyromimetic activity)

RN 725239-30-5 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(3'-ethyl-6-hydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:927006 CAPLUS
 DOCUMENT NUMBER: 141:395288
 TITLE: New [3,5-dihalo-4-(4-hydroxyphenoxy)phenyl]acetic acid derivatives useful as thyroid receptor ligands, and their preparation, pharmaceutical compositions, and methods of use

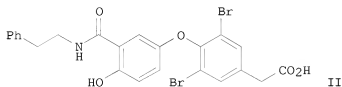
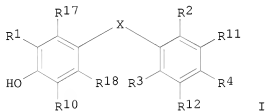
INVENTOR(S): Ryono, Dennis E.; Hangeland, Jon J.; Friends, Todd J.; Dejneka, Tamara; Devasthale, Pratik; Caringal, Yolanda V.; Zhang, Minsheng; Dowskyko, Arthur M. P.; Malm,

PATENT ASSIGNEE(S): Johan; Sanin, Andrei
 SOURCE: Bristol-Myers Squibb Company, USA
 PCT Int. Appl., 94 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004093799	A2	20041104	WO 2004-US11883	20040416
WO 2004093799	A3	20050224		

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 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 20050004184 A1 20050106 US 2004-826100 20040415
 PRIORITY APPLN. INFO.: US 2003-463774P P 20030418
 OTHER SOURCE(S): MARPAT 141:395288
 GI



AB Thyroid receptor ligands are provided which have the general formula I [wherein: R1 = (un)substituted CONR5R6, CH2NR5R6, NR5COR6, OR7, R8, 4-R9-4,5-dihydrooxazol-2-yl; R2, R3 = H, halo, C1-4 alkyl or C3-5 cycloalkyl, provided that at least 1 of R2 and R3 ≠ H; R4 =

(CH₂)_nR13 or (CH₂)_nCONR16CR13R14R15; R5, R6 = H, (hetero)aryl, (cyclo)alkyl, or (hetero)aralkyl; R7 = (hetero)aryl, alkyl, or (hetero)aralkyl; R8 = (hetero)aryl or cycloalkyl; R9 = R7 or H; R10 = H, halo, cyano, or alkyl; R11, R12 = H, halo, alkoxy, OH, cyano, or alkyl; R13 = COOH and esters, phosphonic and phosphinic acid and esters, sulfonic acid, tetrazole, hydroxamic acid, thiazolidinedione, acylsulfonamide, or other carboxylic acid surrogates; R14, R15 = H, alkyl; or R14R15 = (CH₂)₂₋₅, forming 3- to 6-membered cycloalkyl rings; R16 = H or Cl-4 alkyl; R17 and R18 = H, halo, or alkyl; n = 0-4; X = O, S, S(O)₂, S(O), Se, CO, NH, or CH₂. In addition, a method is provided for preventing, inhibiting or treating diseases or disorders associated with metabolism dysfunction, or which are dependent upon the expression of, a T3 regulated gene, wherein a compound I is administered therapeutically. Claims cover the above, as well as pharmaceutical compns. containing I, and methods of coadministration of I with other compds., particularly certain antidiabetic agents. Compds. I include selective agonists, partial agonists, antagonists, and partial antagonists of thyroid receptors (no data). Approx. 168 compds. were prepared. For instance, Me (3,5-dibromo-4-hydroxyphenyl)acetate underwent O-arylation with (4-MeOC₆H₄)₂I+ BF₄⁻, and the resultant 4-methoxyphenyl ether derivative underwent a sequence of: (1) formylation in the 3-position, (2) O-demethylation, (3) oxidation of the aldehyde to an acid, (4) amidation of the acid, and (5) alkaline saponification of the ester, to give title compound

II.

II

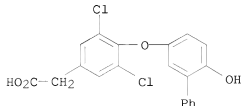
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 788823-77-8P 788823-78-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of [dihalo(hydroxyphenoxy)phenyl]acetic acid derivs. as thyroid receptor ligands)

RN 725239-22-5 CAPLUS

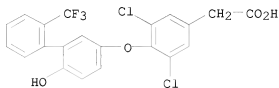
CN Benzeneacetic acid, 3,5-dichloro-4-[(6-hydroxy[1,1'-biphenyl]-3-yl)oxy]-(CA INDEX NAME)



10/923,271

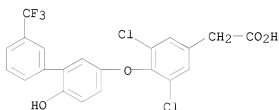
RN 725239-24-7 CAPLUS

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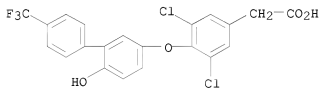
RN 725239-26-9 CAPLUS

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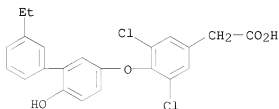
RN 725239-28-1 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[[6-hydroxy-4'-(trifluoromethyl)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)



RN 725239-30-5 CAPLUS

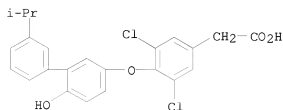
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10/923,271

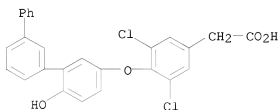
RN 725239-32-7 CAPLUS

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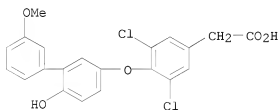
RN 725239-34-9 CAPLUS

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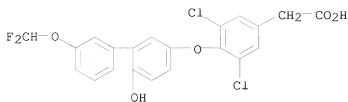
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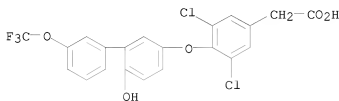
RN 725239-37-2 CAPLUS

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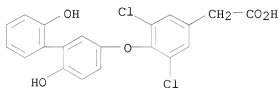
RN 725239-39-4 CAPLUS

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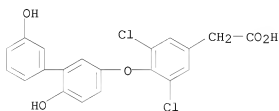
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RN 725239-43-0 CAPLUS

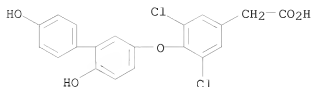
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RN 725239-45-2 CAPLUS

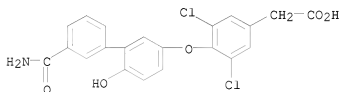
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10/923,271



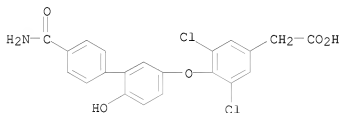
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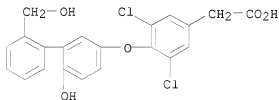
RN 788823-55-2 CAPLUS

CN Benzeneacetic acid, 4-[[4'-(aminocarbonyl)-6-hydroxy[1,1'-biphenyl]-3-yl]oxy]-3,5-dichloro- (CA INDEX NAME)



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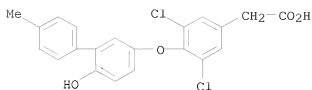
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RN 788823-57-4 CAPLUS

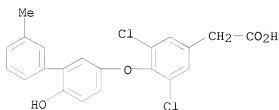
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10/923,271



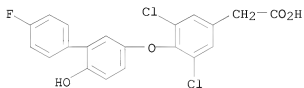
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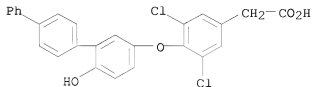
RN 788823-59-6 CAPLUS

CN Benzenecetic acid, 3,5-dichloro-4-[(4'-fluoro-6-hydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



RN 788823-60-9 CAPLUS

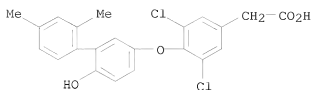
CN Benzenecetic acid, 3,5-dichloro-4-[(6-hydroxy[1,1':4',1''-terphenyl]-3-yl)oxy]- (9CI) (CA INDEX NAME)



RN 788823-61-0 CAPLUS

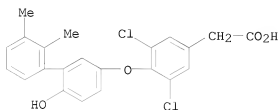
CN Benzenecetic acid, 3,5-dichloro-4-[(6-hydroxy-2',4'-dimethyl[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)

10/923,271



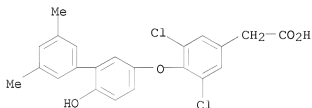
RN 788823-62-1 CAPLUS

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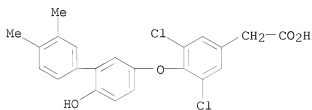
RN 788823-63-2 CAPLUS

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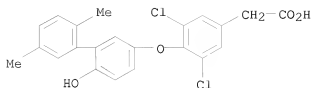
RN 788823-64-3 CAPLUS

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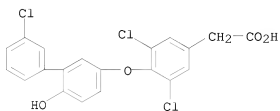
RN 788823-65-4 CAPLUS

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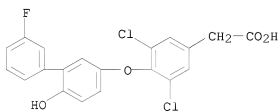
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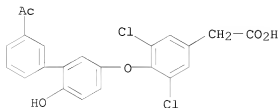
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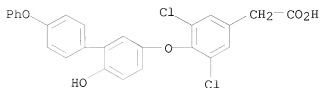
RN 788823-68-7 CAPLUS

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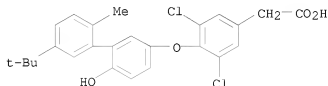
RN 788823-69-8 CAPLUS

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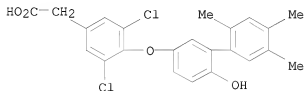
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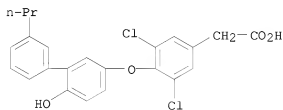
RN 788823-71-2 CAPLUS

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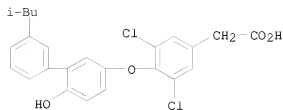
RN 788823-72-3 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(6-hydroxy-3'-propyl[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



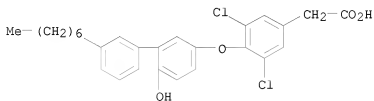
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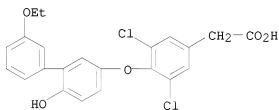
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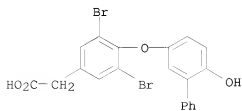
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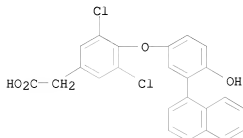


RN 788823-76-7 CAPLUS

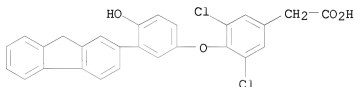
CN Benzenecetic acid, 3,5-dibromo-4-[(6-hydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



RN 788823-77-8 CAPLUS

CN Benzeacetic acid, 3,5-dichloro-4-[4-hydroxy-3-(1-naphthalenyl)phenoxy]-
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RN 788823-78-9 CAPLUS

CN Benzeacetic acid, 3,5-dichloro-4-[3-(9H-fluoren-2-yl)-4-hydroxyphenoxy]-
(CA INDEX NAME)REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2009 ACS on SIN

ACCESSION NUMBER: 2004:465510 CAPLUS

DOCUMENT NUMBER: 141:133551

TITLE: Thyroid receptor ligands. Part 2: thyromimetics with
improved selectivity for the thyroid hormone receptor
betaAUTHOR(S): Hangeland, Jon J.; Doweiko, Arthur M.; Dejneka,
Tamara; Friends, Todd J.; Devasthale, Pratik;
Mellstrom, Karin; Sandberg, Johnny; Grynfarb, Marlena;
Sack, John S.; Einspahr, Howard; Faernegardh, Mathias;
Husman, Bolette; Ljunggren, Jan; Koehler, Konrad;
Sheppard, Cheryl; Malm, Johan; Ryono, Denis E.CORPORATE SOURCE: Pharmaceutical Research Institute, Bristol-Myers
Squibb, Princeton, NJ, 08543, USASOURCE: Bioorganic & Medicinal Chemistry Letters (2004),
14(13), 3549-3553

CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

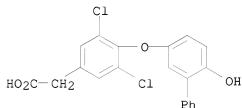
LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:133551

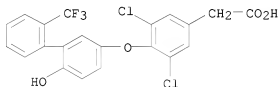
AB A set of thyromimetics having improved selectivity for TR- β 1 were
prepared by replacing the 3'-iso-Pr group of 2 and 3 with substituents

having increased steric bulk. From this limited SAR study, the most potent and selective compds. identified were derived from 2 and contained a 3'-Ph moiety bearing small hydrophobic groups meta to the biphenyl link. X-ray crystal data of 15c complexed with TR- β 1 LBD shows methionine 442 to be displaced by the bulky R3' Ph Et amide side chain. Movement of this amino acid side chain provides an expanded pocket for the bulky side chain while the ligand-receptor complex retains full agonist activity.

IT 725239-22-5P 725239-24-7P 725239-26-9P
 725239-28-1P 725239-30-5P 725239-32-7P
 725239-34-9P 725239-35-0P 725239-37-2P
 725239-39-4P 725239-41-8P 725239-43-0P
 725239-45-2P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (structure activity relationships of thyromimetics with selectivity for thyroid hormone receptor beta)
 RN 725239-22-5 CAPLUS
 CN Benzenesacetic acid, 3,5-dichloro-4-[(6-hydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)

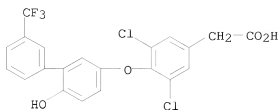


RN 725239-24-7 CAPLUS
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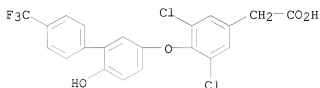
RN 725239-26-9 CAPLUS
 CN Benzenesacetic acid, 3,5-dichloro-4-[[6-hydroxy-3'-(trifluoromethyl)[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)

10/923,271



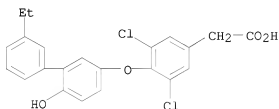
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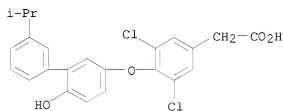
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CN Benzeneacetic acid, 3,5-dichloro-4-[(3'-ethyl-6-hydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



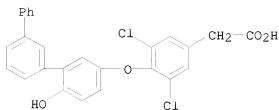
RN 725239-32-7 CAPLUS

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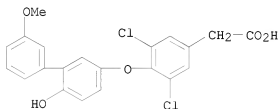
RN 725239-34-9 CAPLUS

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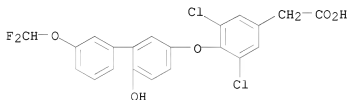
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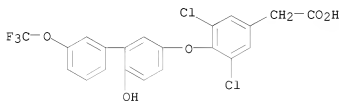
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CN Benzeneacetic acid, 3,5-dichloro-4-[[3'-(difluoromethoxy)-6-hydroxy[1,1'-biphenyl]-3-yl]oxy]- (CA INDEX NAME)



RN 725239-39-4 CAPLUS

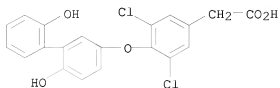
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RN 725239-41-8 CAPLUS

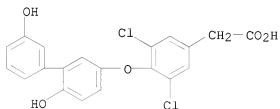
10/923,271

CN Benzeneacetic acid, 3,5-dichloro-4-[(2',6-dihydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



RN 725239-43-0 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(3',6-dihydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)



RN 725239-45-2 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-4-[(4',6-dihydroxy[1,1'-biphenyl]-3-yl)oxy]- (CA INDEX NAME)

